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Remarks

Claims 1-24 are pending in the application; claims 25-34 are withdrawn from consideration.

Claims 1-4, 6-13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (USPGPUB 20040028009, hereinafter Dorenbosch) in view of Oishi (US PGPUB 20020154624, hereinafter Oishi). Applicants respectfully note that the introductory paragraph of Section 4 of the Office Action (Pg. 3) indicates that only claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch in view of Oishi; however, the detailed portion of Section 4 indicates that Applicants' claims 6-13 and 16 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch in view of Oishi. Thus, Applicants has addressed these rejections in conjunction with the rejection of claims 1-4.

Claims 18, 19, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi in view of Barber et al. (US PGPUB 20040076134, hereinafter Barber).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 4 above, and further in view of Leung (US Patent 6487605, hereinafter Leung).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 12 above, and further in view of Rezaiifar (US PGPUB 20040085931, hereinafter Rezaiifar).

Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 1 above, and further in view of Su (US PGPUB 20030172142, hereinafter Su).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi and modified by Barber as applied to claim 18 above, and further in view of Gillies et al. (US PGPUB 20030212821, hereinafter Gillies).

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi modified by Barber as applied to claim 18 above, and further in view of Su.

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Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewritten to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Rejection Under 35 U.S.C. 103(a)

Claims 1-4, 6-13, and 16

Claims 1-4, 6-13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch in view of Oishi. The rejection is traversed.

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Dorenbosch and Oishi, alone or in combination, fail to teach or suggest Applicants' invention of claim 1 as a whole.

Dorenbosch discloses a system for effecting a seamless handoff between IP connections. As admitted by the Examiner, however, Dorenbosch fails to teach or suggest changing the actual IP address of the mobile terminal that is used by the NAT device or a rule for mapping the actual IP address to the virtual IP address, as claimed in Applicants' claim 1.

Furthermore, Oishi fails to bridge the substantial gap between Dorenbosch and Applicants' claim 1.

In general, Oishi discloses a translator connected to a first network for transferring data in a first protocol, to a second network for transferring data in a second protocol, and to a translation server to which other translators are connected, for retaining translation information for a protocol translation between the first protocol and second protocol. (Oishi, Abstract).

Oishi, however, alone or in combination with Dorenbosch, fails to teach or suggest at least the limitation of "changing the actual IP address of the mobile node used by the NAT device, and a rule for mapping the actual IP address to the virtual IP address," as claimed in Applicants' claim 1. As claimed in Applicants' claim 1, the virtual IP address associated with the mobile node is an invariant virtual IP address and, thus, Applicants' claim 1 changes a rule for mapping an actual IP address of a mobile node to an invariant virtual IP address of the mobile node.

By contrast, Oishi describes a translation rule for mapping a source IP address of a mobile node to a variant virtual source IP address, which is the IP address of the translator through which the mobile terminal is communicating.

As described in Oishi, the terminal 41 has two associated IP addresses: a home IP address given to terminal 41 by the home network 1 (denoted in Oishi as IP address t6) and a care of address given to terminal 41 by foreign network 2 (denoted in Oishi as IP address p6). (Oishi, Para. 0085). A translation rule is maintained in translator 12. The translation rule maps the source IP address t6 of terminal 41 to a virtual source IP address 14, which, as taught in Oishi, is an IP address of translator 12. This translation rule is depicted as the first entry in FIG. 22 of Oishi. Specifically, Oishi states that "...the above

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prepared entry (entry #1 in FIG. 22) is found and therefore a source IP address t6 of this packet, an IPv4 address 14 of the translator 12, a source port number, and a destination port number of this packet are written into the entry (entry #1 in FIG. 22)." (Oishi, Para. 0088).

In other words, referring to FIG. 22 of Oishi, Applicants respectfully note that the virtual source IP address taught in Oishi is not invariant. Rather, as seen from a comparison of the first and fourth entries of FIG. 22, even when the source IP address remains unchanged (illustratively, the source IP address is t6 in both entries because terminal 41 is still being served by the home network 1), the virtual source IP address changes (illustratively, the virtual source IP address is 14 in the first entry and m4 in the fourth entry). Thus, in this case, the virtual source IP address is not invariant. Rather, the virtual source IP address changed. Thus, this mapping shown in FIG. 22 of Oishi does not teach or suggest the mapping rule claimed in Applicants' claim 1.

Thus, Oishi does not teach or suggest changing a rule for mapping the actual IP address of a mobile node to an invariant virtual IP address of the mobile node. Rather, Oishi teaches modification of a translation rule that maps a source IP address of a mobile node to a variant virtual source IP address. This is clearly seen from the different examples described in Oishi in which terminal 41 changes the translator through which it is communicating with terminal 42 and, thus, changes the virtual source IP address (which, as described in Oishi is the IP address of the translator currently being used by terminal 41).

As such, Oishi, alone or in combination with Dorenbosch, fails to teach or suggest at least the limitation of "changing the actual IP address of the mobile node used by the NAT device, and a rule for mapping the actual IP address to the virtual IP address," as claimed in Applicants' claim 1.

Moreover, Applicants respectfully note that Oishi actually teaches away from Applicants' claim 1. As described hereinabove, the virtual IP address of Applicants' claim 1 is invariant, whereas the virtual source IP address taught in Oishi varies as the source terminal changes the translator through which it communicates. Thus, Oishi teaches away from Applicants' claim 1.

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The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Thus, it is impermissible to focus either on the "gist" or "core" of the invention. Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. Dorenbosch and Oishi, alone or in combination, fail to teach or suggest Applicants' claim 1, as a whole.

As such, independent claim 1 is patentable over Dorenbosch in view of Oishi under 35 U.S.C. 103(a).

Since all of the dependent claims that depend from independent claim 1 include all the limitations of claim 1, each such dependent claim is also allowable over Dorenbosch in view of Oishi. Therefore, the rejection should be withdrawn.

Claims 18, 19, 21 and 14

Claims 18, 19, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi in view of Barber et al. The rejection is traversed.

Independent claim 18 recites relevant limitations similar to those recited in independent claim 1. As such, for at least the reasons discussed above with respect to claim 1, Oishi fails to teach or suggest Applicants' claim 18 as a whole.

Additionally, as admitted by the Examiner, Oishi also fails to teach a mobile node comprising a network layer and an intermediate driver. (Office Action, Pg. 14).

Furthermore, Barber fails to bridge the substantial gap between Oishi and Applicants' claim 18.

In general, Barber discloses integrated user and radio management in a wireless network environment. Barber, however, fails to teach or suggest a mobile node having a network layer and an intermediate driver.

In the Office Action, the Examiner cites a specific portion of Barber, asserting that the cited portion of Barber discloses a mobile node having a network layer and an intermediate driver. The cited portion of Barber, however, has nothing to do with a mobile node. Rather, the cited portion of Barber describes a wireless access point (AP). Specifically, the cited portion of Barber states that "[a]s shown in the figure, AP 104

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comprises a processor 202, program code 204, data store 206, a network interface to receive data from and said data to other network devices such as client 102....Other elements, components and modules might be present in AP 104, but are not shown.” (Barber, Par. 0065, Emphasis added).

Thus, Barber fails to teach or suggest a mobile node having a network layer and an intermediate driver.

As such, since each of Oishi and Barber fails to teach or suggest a mobile node having a network layer and an intermediate driver, any permissible combination of Oishi and Barber (assuming such combination is even possible) would also fail to teach or suggest a mobile node having a network layer and an intermediate driver. Thus, Oishi and Barber, alone or in combination, fail to teach or suggest Applicants’ claim 18, as a whole.

As such, independent claim 18 is patentable over Oishi in view of Barber under 35 U.S.C. 103(a). Furthermore, since all of the dependent claims that depend from independent claim 18 include all the limitations of claim 18, each such dependent claim is also allowable over Oishi in view of Barber. Therefore, the rejection should be withdrawn.

Claims 5, 14, 15, 17, 20, 22 and 23

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 4 above, and further in view of Leung. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 12 above, and further in view of Rezaiifar. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosch and modified by Oishi as applied to claim 1 above, and further in view of Su. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi and modified by Barber as applied to claim 18 above, and further in view of Gillies. The rejections are traversed.

Since all of the dependent claims that depend from independent claims 1 and 18 include all the limitations of claims 1 and 18, each such dependent claim is also allowable over, respectively, Dorenbosch in view of Oishi and Oishi in view of Barber.

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Accordingly, any attempted combination of the Dorenbosch and Oishi and Oishi and Barber references with any other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claims. Therefore, the rejections should be withdrawn.

Secondary References

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

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Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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